

SEQUENCE LISTING

<110> Abbott Laboratories
Davidson, Donald J.

<120> NOVEL ANTIANGIOGENIC PEPTIDES,
POLYNUCLEOTIDES ENCODING SAME AND METHODS FOR INHIBITING
ANGIOGENESIS

<130> 5940.US.P3

<140> 08/924,287

<141> 1997-09-05

<150> US 08/851,350

<151> 1997-05-05

<150> US 08/832,087

<151> 1997-04-03

<150> US 08/643,219

<151> 1996-05-03

<160> 40

<170> FastSEQ for Windows Version 4.0

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<211> 791

<212> PRT

<213> Homo sapiens

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Lys	Cys	Glu	Glu	Asp	Glu	Glu	Phe	Thr	Cys	Arg	Ala	Phe	Gln	Tyr	His
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Ser	Lys	Glu	Gln	Gln	Cys	Val	Ile	Met	Ala	Glu	Asn	Arg	Lys	Ser	Ser
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Cys	Tyr	Thr	Thr	Asp	Pro	Glu	Lys	Arg	Tyr	Asp	Tyr	Cys	Asp	Ile	Leu
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Glu	Cys	Glu	Glu	Glu	Cys	Met	His	Cys	Ser	Gly	Glu	Asn	Tyr	Asp	Gly
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Lys	Ile	Ser	Lys	Thr	Met	Ser	Gly	Leu	Glu	Cys	Gln	Ala	Trp	Asp	Ser
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Gln	Ser	Pro	His	Ala	His	Gly	Tyr	Ile	Pro	Ser	Lys	Phe	Pro	Asn	Lys
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Asn	Leu	Lys	Lys	Asn	Tyr	Cys	Arg	Asn	Pro	Asp	Arg	Glu	Leu	Arg	Pro
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Trp	Cys	Phe	Thr	Thr	Asp	Pro	Asn	Lys	Arg	Trp	Glu	Leu	Cys	Asp	Ile
225					230					235					240
Pro	Arg	Cys	Thr	Thr	Pro	Pro	Pro	Ser	Ser	Gly	Pro	Thr	Tyr	Gln	Cys
			245						250					255	
Leu	Lys	Gly	Thr	Gly	Glu	Asn	Tyr	Arg	Gly	Asn	Val	Ala	Val	Thr	Val
			260					265					270		
Ser	Gly	His	Thr	Cys	Gln	His	Trp	Ser	Ala	Gln	Thr	Pro	His	Thr	His
		275					280					285			
Asn	Arg	Thr	Pro	Glu	Asn	Phe	Pro	Cys	Lys	Asn	Leu	Asp	Glu	Asn	Tyr
	290					295					300				
Cys	Arg	Asn	Pro	Asp	Gly	Lys	Arg	Ala	Pro	Trp	Cys	His	Thr	Thr	Asn
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Ser	Gln	Val	Arg	Trp	Glu	Tyr	Cys	Lys	Ile	Pro	Ser	Cys	Asp	Ser	Ser
			325						330					335	
Pro	Val	Ser	Thr	Glu	Gln	Leu	Ala	Pro	Thr	Ala	Pro	Pro	Glu	Leu	Thr
			340					345					350		
Pro	Val	Val	Gln	Asp	Cys	Tyr	His	Gly	Asp	Gly	Gln	Ser	Tyr	Arg	Gly
		355					360					365			
Thr	Ser	Ser	Thr	Thr	Thr	Thr	Gly	Lys	Lys	Cys	Gln	Ser	Trp	Ser	Ser
	370					375					380				
Met	Thr	Pro	His	Arg	His	Gln	Lys	Thr	Pro	Glu	Asn	Tyr	Pro	Asn	Ala
385					390					395					400
Gly	Leu	Thr	Met	Asn	Tyr	Cys	Arg	Asn	Pro	Asp	Ala	Asp	Lys	Gly	Pro
			405						410					415	
Trp	Cys	Phe	Thr	Thr	Asp	Pro	Ser	Val	Arg	Trp	Glu	Tyr	Cys	Asn	Leu
			420					425					430		
Lys	Lys	Cys	Ser	Gly	Thr	Glu	Ala	Ser	Val	Val	Ala	Pro	Pro	Pro	Val
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Val	Leu	Leu	Pro	Asp	Val	Glu	Thr	Pro	Ser	Glu	Glu	Asp	Cys	Met	Phe
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Gly	Asn	Gly	Lys	Gly	Tyr	Arg	Gly	Lys	Arg	Ala	Thr	Thr	Val	Thr	Gly
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Thr	Pro	Cys	Gln	Asp	Trp	Ala	Ala	Gln	Glu	Pro	His	Arg	His	Ser	Ile
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Phe	Thr	Pro	Glu	Thr	Asn	Pro	Arg	Ala	Gly	Leu	Glu	Lys	Asn	Tyr	Cys
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Ser	Phe	Asp	Cys	Gly	Lys	Pro	Gln	Val	Glu	Pro	Lys	Lys	Cys	Pro	Gly
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Arg	Val	Val	Gly	Gly	Cys	Val	Ala	His	Pro	His	Ser	Trp	Pro	Trp	Gln
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Val	Ser	Leu	Arg	Thr	Arg	Phe	Gly	Met	His	Phe	Cys	Gly	Gly	Thr	Leu
			580					585					590		
Ile	Ser	Pro	Glu	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Leu	Glu	Lys	Ser
		595					600					605			
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Asn	Leu	Glu	Pro	His	Val	Gln	Glu	Ile	Glu	Val	Ser	Arg	Leu	Phe	Leu
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Glu	Pro	Thr	Arg	Lys	Asp	Ile	Ala	Leu	Leu	Lys	Leu	Ser	Ser	Pro	Ala
				645					650					655	

Val	Ile	Thr	Asp	Lys	Val	Ile	Pro	Ala	Cys	Leu	Pro	Ser	Pro	Asn	Tyr
			660					665					670		
Val	Val	Ala	Asp	Arg	Thr	Glu	Cys	Phe	Ile	Thr	Gly	Trp	Gly	Glu	Thr
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Gln	Gly	Thr	Phe	Gly	Ala	Gly	Leu	Leu	Lys	Glu	Ala	Gln	Leu	Pro	Val
	690					695					700				
Ile	Glu	Asn	Lys	Val	Cys	Asn	Arg	Tyr	Glu	Phe	Leu	Asn	Gly	Arg	Val
705					710				715					720	
Gln	Ser	Thr	Glu	Leu	Cys	Ala	Gly	His	Leu	Ala	Gly	Gly	Thr	Asp	Ser
				725				730						735	
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Phe	Glu	Lys	Asp	Lys
			740				745						750		
Tyr	Ile	Leu	Gln	Gly	Val	Thr	Ser	Trp	Gly	Leu	Gly	Cys	Ala	Arg	Pro
		755					760					765			
Asn	Lys	Pro	Gly	Val	Tyr	Val	Arg	Val	Ser	Arg	Phe	Val	Thr	Trp	Ile
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<220>
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<210> 4
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<213> Artificial Sequence

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<223> PCR Amplification Primer

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<210> 6

<211> 7

<212> PRT

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<223> Synthetic K5 Peptide

<221> VARIANT

<222> (5)...(5)

<223> Xaa = 3-I-Tyr at position 5

<400> 6

Pro Arg Lys Leu Xaa Asp Tyr
1 5

<210> 7

<211> 22

<212> DNA

<213> Artificial Sequence

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<223> Forward Primer

<400> 7

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22

<210> 8

<211> 92

<212> DNA

<213> Artificial Sequence

<220>

<223> Reverse Primer

<400> 8

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taactggctg agcgaagaca gattgcaaag ta
92

<210> 9

<211> 111

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic leader sequence encodes a PHO1 secretion

signal

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 ttcgctcagc cagttatctg cactaccgtt ggttccgctg ccgagggatc c
 111

<210> 10
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR Amplification Primer

<400> 10
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 18

<210> 11
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR Amplification Primer

<400> 11
 ctgcttccag atgtagaga
 19

<210> 12
 <211> 2497
 <212> DNA
 <213> Homo sapiens

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 120
 ctatgtgaat acccaggggg cttcactgtt cagtgtcact aagaagcagc tgggagcagg
 180
 aagtatagaa gaatgtgcag caaaatgtga ggaggacgaa gaattcacct gcagggcatt
 240
 ccaatatcac agtaaagagc aacaatgtgt gataatggct gaaaacagga agtcctccat
 300
 aatcattagg atgagagatg tagttttatt tgaaaagaaa gtgtatctct cagagtgcaa
 360
 gactgggaat ggaaagaact acagaggggac gatgtccaaa acaaaaaatg gcatcacctg
 420
 tcaaaaatgg agttccactt ctccccacag acctagattc tcacctgcta cacaccctc
 480
 agagggactg gaggagaact actgcaggaa tccagacaac gatccgcagg ggccctgggtg
 540
 ctatactact gatccagaaa agagatatga ctactgcgac attcttgagt gtgaagagga
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 720
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 1020
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 1080
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 1380
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 1800
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 1920
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 1980
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 2040
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 2100
 ttgtctgcc tcccaaaatt atgtggctgc tgaccggacc gaatgtttcg tcaactggctg
 2160
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 2220
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 2280
 ctgtgctggg catttgccg gaggcactga cagttgccag ggtgacagt gaggtcctct
 2340

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ggtttgcttc gagaaggaca aatacatttt acaaggagtc acttcttggg gtcttggtg
2400
tgcacgcccc aataagcctg gtgtctatgt tcgtgtttca aggtttgtta cttggattga
2460
gggagtgatg agaaataatt aattggacgg gagacag
2497

<210> 13
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Amplification Primer

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23

<210> 14
<211> 128
<212> DNA
<213> Artificial Sequence

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<223> Synthetic DNA Fragment synVB1

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ccttaattaa ccgggagccc gcctaataag cgggcttttt ttgctcttc atagtgactg
120
agacgtcg
128

<210> 15
<211> 175
<212> DNA
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<220>
<223> Synthetic DNA Fragment synVB2

<400> 15
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ttaaccggga gccgcgctaa tgagcgggct tttttttgct cttcacgaga cgctcg
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<210> 16
<211> 156
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic DNA Fragment synVB3

<400> 16
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 aatgagcggg cttttttttg ctcttcacga gacgtc
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<210> 17
 <211> 172
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic DNA Fragment synVB4

<400> 17
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<210> 18
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic K5 Peptide

<221> VARIANT
 <222> (7)...(7)
 <223> Xaa = 3-I-Tyr at position 7

<400> 18
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 1 5

<210> 19
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> DNA Fragment

<400> 19
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 12

<210> 20
 <211> 12
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<220>
<223> DNA Fragment

<400> 20
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12

<210> 21
<211> 18
<212> DNA
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<220>
<223> Forward Vector Primer

<400> 21
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18

<210> 22
<211> 18
<212> DNA
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<220>
<223> Reverse Vector Primer

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<210> 23
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<212> DNA
<213> Artificial Sequence

<220>
<223> Cassette Primer

<400> 23
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<210> 24
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Ubi-5p Primer

<400> 24
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<210> 25
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> Ubi-3p Primer

<400> 25

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18

<210> 26

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> pET3p-ATG Primer

<400> 26

catggtatat ctccttctt

19

<210> 27

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> T7RevTerm Primer

<400> 27

tgagcaataa ctagcataac

20

<210> 28

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> pET5p Primer

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<210> 29

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Strom-3p Primer

<400> 29

ttaggtctca ggggagt

17

<210> 30

<211> 19
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<220>
 <223> Strom-5p Primer

<400> 30
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<210> 31
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Ek-Cut-5p Primer

<400> 31
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 21

<210> 32
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Ek-Cut-3p Primer

<400> 32
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 21

<210> 33
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 33
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 21

<210> 34
 <211> 101
 <212> PRT
 <213> Homo sapiens

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 20 25 30
 Ala Thr Thr Val Thr Gly Thr Pro Cys Gln Asp Trp Ala Ala Gln Glu

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      35      40      45
Pro His Arg His Ser Ile Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly
  50      55      60
Leu Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Gly Gly Pro
65      70      75      80
Trp Cys Tyr Thr Thr Asn Pro Arg Lys Leu Tyr Asp Tyr Cys Asp Val
      85      90      95
Pro Gln Cys Ala Ala
      100

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<210> 35
 <211> 102
 <212> PRT
 <213> Mus musculus

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<400> 35
Val Glu Leu Pro Thr Val Ser Gln Glu Pro Ser Gly Pro Ser Asp Ser
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Glu Thr Asp Cys Met Tyr Gly Asn Gly Lys Asp Tyr Arg Gly Lys Thr
      20      25      30
Ala Val Thr Ala Ala Gly Thr Pro Cys Gln Gly Trp Ala Ala Gln Glu
      35      40      45
Pro His Arg His Ser Ile Phe Thr Pro Gln Thr Asn Pro Arg Ala Gly
  50      55      60
Leu Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Asn Gly Pro
65      70      75      80
Trp Cys Tyr Thr Thr Asn Pro Arg Lys Leu Tyr Asp Tyr Cys Asp Ile
      85      90      95
Pro Leu Cys Ala Ser Ala
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<210> 36
 <211> 101
 <212> PRT
 <213> Macaca mulatta

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<400> 36
Ala Ala Pro Pro Pro Val Ala Gln Leu Pro Asp Ala Glu Thr Pro Ser
  1      5      10      15
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      20      25      30
Ala Thr Thr Val Thr Gly Thr Pro Cys Gln Glu Trp Ala Ala Gln Glu
      35      40      45
Pro His Ser His Arg Ile Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly
  50      55      60
Leu Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Gly Gly Pro
65      70      75      80
Trp Cys Tyr Thr Thr Asn Pro Arg Lys Leu Phe Asp Tyr Cys Asp Val
      85      90      95
Pro Gln Cys Ala Ala
      100

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<210> 37
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 <212> PRT
 <213> Bos taurus

<400> 37

Pro Ala Ala Pro Gln Ala Pro Gly Val Glu Asn Pro Pro Glu Ala Asp
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 20 25 30
 Val Ala Gly Val Pro Cys Gln Glu Trp Ala Ala Gln Glu Pro His His
 35 40 45
 His Ser Ile Phe Thr Pro Glu Thr Asn Pro Gln Ser Gly Leu Glu Arg
 50 55 60
 Asn Tyr Cys Arg Asn Pro Asp Gly Asp Val Asn Gly Pro Trp Cys Tyr
 65 70 75 80
 Thr Met Asn Pro Arg Lys Leu Phe Asp Tyr Cys Asp Val Pro Gln Cys
 85 90 95
 Glu

<210> 38
 <211> 100
 <212> PRT
 <213> Sus scrofa

<400> 38
 Thr Asn Phe Pro Ala Ile Ala Gln Val Pro Ser Val Glu Asp Leu Ser
 1 5 10 15
 Glu Asp Cys Met Phe Gly Asn Gly Lys Arg Tyr Arg Gly Lys Arg Ala
 20 25 30
 Thr Thr Val Ala Gly Val Pro Cys Gln Glu Trp Ala Ala Gln Glu Pro
 35 40 45
 His Arg His Ser Ile Phe Thr Pro Glu Thr Asn Pro Arg Ala Gly Leu
 50 55 60
 Glu Lys Asn Tyr Cys Arg Asn Pro Asp Gly Asp Asp Asn Gly Pro Trp
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 Cys Tyr Thr Thr Asn Pro Gln Lys Leu Phe Asp Tyr Cys Asp Val Pro
 85 90 95
 Gln Cys Val Thr
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<210> 39
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 <212> PRT
 <213> Homo sapiens

<400> 39
 Pro Glu Lys Arg Tyr Asp Tyr
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<210> 40
 <211> 31
 <212> PRT
 <213> Homo sapiens

<400> 40
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